

# Nantucket Electric Company

## 2004 Service Quality Report

March 1, 2005

Submitted to:  
Massachusetts Department of  
Telecommunications and Energy  
Docket No. D.T.E. 05-22

Submitted by:

**Nantucket Electric**

A **National Grid** Company





**FORM B (ELECTRIC COMPANIES)**

**Nantucket Electric Company**

**March 1, 2005**

<i><b>PENALTY PROVISIONS</b></i>	<i><b>Years in Database (As of January 2004)</b></i>	<i><b>Mean and Benchmark (Applicable to 2004)</b></i>	<i><b>Performance in 2004</b></i>	<i><b>Comments</b></i>
Telephone Answering Factor (%)	7	Mean: 78.1% Benchmark: 66.2% - 90.0%	96.1%	
Emergency Answering (%)	2	Mean: Not available Benchmark: Does not apply	98.4%	The company started collecting this data in January 2002. No benchmark is calculated for this measure because no revenue penalty or incentive mechanism has been assigned to it, pursuant to the company's service quality plan.
Service Appointments Met (%)	2	Mean: Not available Benchmark: Not available	100.0%	The company started collecting this data in January 2002. The mean and benchmark will be calculated for application to 2005 performance.
Meter Reads	7	Mean: 96.2% Benchmark: 92.7% - 99.7%	99.5%	
Consumer Division Cases	10	Mean: 4 Benchmark: 1 - 7	2	
Bill Adjustments (\$/1000 customers)	10	Mean: \$27.37 Benchmark: \$0.00 - \$88.30	\$0	
SAIFI	7	Mean: 0.428 Benchmark: 0.128 - 0.724	0.611	
SAIDI	7	Mean: 21.64 Benchmark: 6.15 - 33.22	30.27	
Lost Time Accident Rate (# of acc/200,000 employee hours)	10	Mean: 3.51 Benchmark: 0 - 7.05	0.00	

**FORM B (ELECTRIC COMPANIES)**

Nantucket Electric Company

March 1, 2005

<b>ADDITIONAL REPORTING</b>	<b>Years in Database (As of January 2004)</b>	<b>Mean and Benchmark (Applicable to 2004)</b>	<b>Performance in 2004</b>	<b>Comments</b>
Staffing Levels	Does not apply	Mean: Does not apply Benchmark: Does not apply		See discussion in Section 3
Restricted Work Day Rate (# of acc/200,000 employee hours worked)	Does not apply	Mean: Does not apply Benchmark: Does not apply	12.96	No mean and benchmark is calculated for this reporting requirement because no revenue penalty or incentive mechanism has been assigned to it, pursuant to the company's service quality plan.
Property Damage > \$50k (#)	Does not apply	Mean: Does not apply Benchmark: Does not apply	0	See discussion in Section 3
Line Loss	Does not apply	Mean: Does not apply Benchmark: Does not apply	9.82%	See discussion in Section 3
Capital Expenditures (# of projects and total \$)	Does not apply	Mean: Does not apply Benchmark: Does not apply	\$4.2 million	See discussion in Section 3
Spare Component & Inventory Policy	Does not apply	Mean: Does not apply Benchmark: Does not apply		See discussion in Section 3
Customer Surveys (1-7): Random	5	Mean: 93% Benchmark: Does not apply	93%	Represents the percent of customers who gave a rating of 5, 6, or 7 on a 7-point scale.
Customer Surveys (1-7): Callers	2	Mean: Not available Benchmark: Does not apply	71%	Represents the percent of customers who gave a rating of 6 or 7 on a 7-point scale. Eight types of transactions were included in the survey, and the overall results are weighted based on the number of transactions performed at the call center during the year. Nantucket customers were first included in this survey during 2002.
Customer Service Guarantees (#, total \$): Lack of Notification of Planned Service Interruptions	2	Mean: Not available Benchmark: Does not apply	\$0	The company started providing customer service guarantees for failure to notify customers of planned service interruptions in 2002.
Customer Service Guarantees (#, total \$): Failure to Keep Service Appointments	2	Mean: Not available Benchmark: Does not apply	\$0	The company started providing customer service guarantees for failure to keep service appointments in 2002.



## Nantucket Electric Service Quality Standards Summary Results

Historical Data by Year	SAIFI	SAIDI	LTA	Calls	DTE Cases	Billing Adjs	Appts Met (1)	Meter Reads
1992			3.99		14	\$0.00		
1993			5.99		11	\$13.59		
1994			9.98		4	\$0.00		
1995			2.00		12	\$0.00		
1996			3.27		5	\$178.41		
1997	0.157	2.87	0.00	71.6%	4	\$95.25		89.7%
1998	0.082	7.47	0.00	75.1%	3	\$0.00		98.9%
1999	0.961	42.51	8.32	77.8%	3	\$0.00		96.4%
2000	0.303	10.86	0.00	80.7%	1	\$0.00		98.2%
2001	0.381	22.85	0.00	59.0%	2	\$0.00		97.4%
2002	0.639	39.50	0.00	84.9%	3	\$0.00	100.0%	93.2%
2003	0.470	25.44	11.49	97.6%	1	\$0.00	100.0%	99.4%
2004	0.611	30.27	0.00	96.1%	2	\$0.00	100.0%	99.5%

Original Benchmark (Performance through 2001)								
Average	0.377	17.31	3.36	72.8%	6	\$28.73	n/a	96.1%
Std Deviation	0.347	15.91	3.69	8.4%	5	\$60.40		3.7%
Max Incentive	0.000	0.00	0.00	89.6%	0	\$0.00		100.0%
Deadband Range	0.030	1.40	0.00	81.2%	1	\$0.00		99.8%
	0.724	33.22	7.05	64.4%	11	\$89.13		92.4%
Max Penalty	1.071	49.13	10.74	56.0%	16	\$149.53		88.7%

Actual 2004 Service Quality Standards (Using Performance Thru 2003)								
Average	0.428	21.64	3.51	78.1%	4	\$27.37	n/a	96.2%
Std Deviation	0.300	15.49	4.63	11.9%	3	\$60.93		3.5%
Max Incentive	0.000	0.00	0.00	100.0%	0	\$0.00		100.0%
Deadband Range	0.128	6.15	0.00	90.0%	1	\$0.00		99.7%
	0.724	33.22	7.05	66.2%	7	\$88.30		92.7%
Max Penalty	1.028	49.13	10.74	56.0%	10	\$149.23		89.2%

(2)

2004 Service Quality Results								
	SAIFI	SAIDI	LTA	Calls	DTE Cases	Billing Adjs	Appts Met	Meter Reads
% allocation	22.5%	22.5%	10.0%	12.5%	5.0%	5.0%	12.5%	10.0%
Max Penalty or Incntve	\$31,273	\$31,273	\$13,899	\$17,374	\$6,950	\$6,950	\$17,374	\$13,899
						Max Penalty or Incentive		\$138,992
Actual (Penalty) Incntv	\$0	\$0	\$0	\$9,938	\$0	\$0	n/a	\$0
						Total net SQ incentive		\$9,938

Actual 2005 Service Quality Standards (Using Performance Thru 2004)								
Average	0.451	22.72	2.51	80.4%	4	\$27.37	100.0%	96.6%
Std Deviation	0.286	14.66	4.12	12.7%	3	\$60.93	0.0%	3.5%
Max Incentive	0.000	0.00	0.00	100.0%	0	\$0.00	100.0%	100.0%
Deadband	0.165	8.06	0.00	93.1%	1	\$0.00	100.0%	100.0%
Range	0.724	33.22	6.63	67.7%	7	\$88.30	100.0%	93.1%
Max Penalty	1.023	49.13	10.74	56.0%	10	\$149.23	100.0%	89.6%

(2)

(1) - "Appointments Met" data collection began in Jan 2002. Performance results are monitored against SQ standards beginning in 2005.

(2) - In accordance with the approved SQ plan, "the floor benchmarks that trigger penalties do not change".  
The 2004/2005 penalty range on this worksheet reflects the application of this rule for the affected measures.

**Nantucket Electric Company**  
**Reliability - Outage Frequency (1)**

<u>Calendar Year</u>	(a) <u>Customer Hrs</u> <u>Interrupted</u>	(b) <u># Customers</u> <u>Interrupted</u>	(c) <u>Avg # of</u> <u>Customers</u>	<u>Frequency</u> formula: (b) ÷ (c)
1997	465	1,523	9,711	0.157
1998	1,173	775	9,414	0.082
1999	7,296	9,899	10,297	0.961
2000	1,921	3,218	10,613	0.303
2001	4,149	4,147	10,894	0.381
2002	7,330	7,119	11,134	0.639
2003	4,814	5,337	11,352	0.470
2004	5,856	7,092	11,609	0.611

		<b><u>Updated Hist</u></b> <b><u>Results</u></b> <b><u>1997 to 2004</u></b>	<b><u>Original</u></b> <b><u>Benchmark</u></b> <b><u>1997 to 2001</u></b>	<b><u>Performance</u></b> <b><u>Measures</u></b> <b><u>for 2005</u></b>
	Average	0.451	0.377	0.451
	STD	0.286	0.347	0.286
Penalty	Max level	1.023	1.071	1.023
	25% level	0.737	0.724	0.724
deadband range	Average	0.451	0.377	0.451
	25% level	0.165	0.030	0.165
Incentive	Max level	0.000	0.000	0.000

Note: Data source - National Grid USA IDS system. Reliability indices exclude 1) all transmission related outages where the Company does not own or operate the equipment, 2) any interruption at the secondary, transformer or service level, and 3) exclusions allowed under the new major event guidelines (any event that causes 15% of customer served in the operating area to be interrupted during the event).

(1) Frequency per Customer Served Interrupted ÷ Average Customers.

**Nantucket Electric Company**  
**Reliability - Outage Duration (1)**

<u>Calendar Year</u>	(a) <u>Customer Hrs</u> <u>Interrupted</u>	<u># Customers</u> <u>Interrupted</u>	(b) <u>Avg # of</u> <u>Customers</u>	<u>Duration (mins)</u> formula: (a) x 60 ÷ (b)
1997	465	1,523	9,711	2.87
1998	1,173	775	9,414	7.47
1999	7,296	9,899	10,297	42.51
2000	1,921	3,218	10,613	10.86
2001	4,149	4,147	10,894	22.85
2002	7,330	7,119	11,134	39.50
2003	4,814	5,337	11,352	25.44
2004	5,856	7,092	11,609	30.27

		<b>Updated Hist</b> <b><u>Data</u></b> <b><u>1997 to 2004</u></b>	<b>Original</b> <b><u>Benchmark</u></b> <b><u>1997 to 2001</u></b>	<b>Performance</b> <b><u>Measures</u></b> <b><u>for 2005</u></b>
	Average	22.72	17.31	22.72
	STD	14.66	15.91	14.66
Penalty	Max level	52.04	49.13	49.13
	25% level	37.38	33.22	33.22
deadband range	Average	22.72	17.31	22.72
	25% level	8.06	1.40	8.06
Incentive	Max level	0.00	0.00	0.00

Note: Data source - National Grid USA IDS system. Reliability indices exclude 1) all transmission related outages where the Company does not own or operate the equipment, 2) any interruption at the secondary, transformer or service level, and 3) exclusions allowed under the new major event guidelines (any event that causes 15% of customer served in the operating area to be interrupted during the event).

(1) Duration per Customer Served (minutes) = Customer Hours Interrupted x 60 ÷ Average Customers.



**Nantucket Electric Company**  
Lost Work Time Accident Rate

Calendar Year	(a) <u>LTA's</u>	(b) <u># of Nant Employees</u>	(c) <u>Hours Worked</u>	<u>Lost Work Time Accident Rate</u> formula: (a) x 200,000 ÷ (c) <u>LTA rate (1)</u>
1992	2	50	100,200	3.99
1993	3	50	100,200	5.99
1994	5	50	100,200	9.98
1995	1	50	100,200	2.00
1996	1	31	61,122	3.27
1997	0	24	48,096	0.00
1998	0	24	48,096	0.00
1999	2	24	48,096	8.32
2000	0	24	48,096	0.00
2001	0	24	48,096	0.00
2002	0	19	37,281	0.00
2003	2	17	34,813	11.49
2004	0	16	30,869	0.00

		<u>Updated Hist Data</u> 1995 to 2004	<u>Original Benchmark</u> 1992 to 2001	<u>Performance Measures for 2005</u>
Average		2.51	3.36	2.51
STD		4.12	3.69	4.12
Penalty	Max level	10.75	10.74	10.74
deadband range	25% level	6.63	7.05	6.63
	Average	2.51	3.36	2.51
	25% level	0.00	0.00	0.00
Incentive	Max level	0.00	0.00	0.00

Note: Lost Time Accident Rate per 200,000 hours worked = Number of Lost Time Accidents x 200,000 ÷ Actual Hours Worked.

**Nantucket Electric Company**  
**Customer Telephone Service - Northboro Call Center**

<u>Year</u>	<u>Calls Ans</u>	<u>&lt;20 sec</u>	<u>%&lt;20 sec (1)</u>
1997	1,765,250	1,263,692	71.6%
1998	1,638,704	1,231,112	75.1%
1999	1,676,906	1,303,929	77.8%
2000	1,936,117	1,562,748	80.7%
2001	2,230,729	1,316,168	59.0%
2002	6,713	5,696	84.9%
2003	7,981	7,786	97.6%
2004	8,738	8,395	96.1%

		<b>Updated Hist</b> <b><u>Data</u></b> <b><u>1997-2004</u></b>	<b>Original</b> <b><u>Benchmark</u></b> <b><u>1997-2001</u></b>	<b>Performance</b> <b><u>Measures</u></b> <b><u>for 2005</u></b>
Penalty	Average	80.4%	72.8%	80.4%
	STD	12.7%	8.4%	12.7%
	Max level	55.0%	56.0%	56.0%
	25% level	67.7%	64.4%	67.7%
deadband range	Average	80.4%	72.8%	80.4%
	25% level	93.1%	81.2%	93.1%
Incentive	Max level	100.0%	89.6%	100.0%

(1) The Percent of Calls Answered Within 20 Seconds is calculated by dividing the number of calls answered within 20 seconds by the total number of calls answered during the year. "Calls answered" include calls answered by a customer service representative (CSR) and calls completed within the Voice Response Unit (VRU). Abandoned calls are not considered. The time to answer is measured once the customer makes a selection to either speak with a CSR or use the VRU.

1997 was the first full year of operation at the Northboro Customer Service Center

Up until August 2002, National Grid operated two call centers that were used to answer calls from customers of its four distribution companies; one located in Northborough, MA and another in Providence, RI. Prior to 2002, National Grid tracked the telephone service statistics by call center only, not by specific company. The benchmarks for Massachusetts Electric Company and Nantucket Electric Company prior to 2002 were based on data from the Northborough call center, since the majority of both companies' calls from customers were answered at that call center. However, beginning January 1, 2002, National Grid started tracking the telephone statistics by company.

**Nantucket Electric Company**  
Department of Telecommunications and Energy Cases

<u>Year</u>	<u>Cases (1)</u>
1992	14
1993	11
1994	4
1995	12
1996	5
1997	4
1998	3
1999	3
2000	1
2001	2
2002	3
2003	1
2004	2

		<b>Updated Hist <u>Data</u> 1995-2004</b>	<b>Original <u>Benchmark</u> 1992-2001</b>	<b>Performance Measures <u>for 2005</u></b>
Penalty	Average	4	6	4
	STD	3	5	3
	Max level	10	16	10
	25% level	7	11	7
deadband range	Average	4	6	4
	25% level	1	1	1
Incentive	Max level	0	0	0

(1) Source of case data: Mass DTE Consumer Division (Electric Company Complaint Rates)

### Nantucket Electric Company

#### DTE Billing Adjustments (Between the Company and a Residential Customer)

<u>Year</u>	<u>Billing Adjustments per DTE (1)</u>	<u>Avg # of Res Customers per Month (2)</u>	<u>Billing Adj per 1,000 Residen Customers (3)</u>
1992	0	6,801	\$0.00
1993	90	6,621	\$13.59
1994	0	6,904	\$0.00
1995	0	7,221	\$0.00
1996	1,407	7,887	\$178.41
1997	825	8,666	\$95.25
1998	0	8,877	\$0.00
1999	0	9,121	\$0.00
2000	0	9,352	\$0.00
2001	0	9,601	\$0.00
2002	0	9,862	\$0.00
2003	0	10,177	\$0.00
2004	0	9,915	\$0.00

		<u>Updated Hist Data</u> <u>1995 to 2004</u>	<u>Original Benchmark</u> <u>1992 to 2001</u>	<u>Performance Measures</u> <u>for 2005</u>
Penalty	Average	\$27.37	\$28.73	\$27.37
	STD	\$60.93	\$60.40	\$60.93
	Max level	\$149.23	\$149.53	\$149.23
deadband range	25% level	\$88.30	\$89.13	\$88.30
	Average	\$27.37	\$28.73	\$27.37
	25% level	\$0.00	\$0.00	\$0.00
Incentive	Max level	\$0.00	\$0.00	\$0.00

(1) Source: Mass DTE Consumer Division (Consumer Division Adjustments Worksheet)

(2) Source FERC Form 1 page 301 - residential customers; Customer count data from 1998 through 2004 excludes small number of competitive supply customers.

(3) Billing adjustments per 1,000 Customers = Billing Adjustments ÷ Avg # of Customers x 1,000.

**Nantucket Electric Company**  
**Customer Service - Service Appointments Met as Scheduled**

<u>Year</u>	<u>Appointments Scheduled</u>	<u>Appointments Met</u>	<u>% Met</u>
2002	5	5	100.0%
2003	4	4	100.0%
2004	2	2	100.0%

		<b><u>Updated Hist Data 2002 to 2004</u></b>	<b><u>Original Benchmark</u></b>	<b><u>Performance Measures for 2005</u></b>
	Average	100.0%	n/a	100.0%
	STD	0.0%	n/a	0.0%
	Penalty	Max level	n/a	100.0%
deadband range	25% level	100.0%	n/a	100.0%
	Average	100.0%	n/a	100.0%
	25% level	100.0%	n/a	100.0%
Incentive	Max level	100.0%	n/a	100.0%

Note: The Company started collecting data on service appointments in January 2002. Performance results are monitored against service quality standards beginning in 2005. Service Appointments refer to a mutually agreed upon arrangement for service between the Company and the customer that specifies the date for the Company's personnel to perform a service activity that requires the presence of the customer at the time of service.

**Nantucket Electric Company**  
**On-Cycle Meter Readings**

<u>Year</u>	<u>Combined Meters</u>	<u>Estimated</u>	<u>% Read (1)</u>
1997	126,004	13,028	89.7%
1998	128,309	1,370	98.9%
1999	161,780	5,899	96.4%
2000	135,397	2,426	98.2%
2001	138,385	3,610	97.4%
2002	141,113	9,634	93.2%
2003	147,410	834	99.4%
2004	146,165	769	99.5%

		<b><u>Updated Hist Data 1997-2004</u></b>	<b><u>Original Benchmark 1997-2001</u></b>	<b><u>Performance Measures for 2005</u></b>
Penalty	Average	96.6%	96.1%	96.6%
	STD	3.5%	3.7%	3.5%
	Max level	89.6%	88.7%	89.6%
	25% level	93.1%	92.4%	93.1%
deadband range	Average	96.6%	96.1%	96.6%
	25% level	100.0%	99.8%	100.0%
Incentive	Max level	100.0%	100.0%	100.0%

(1) Percent Read = 1 - (Meters Estimated ÷ Total Meters).

Nantucket Electric was acquired by New England Electric in 1996. 1997 was the first full year of meter data collection.







## **Additional Service Quality Reporting Requirements**

### Staffing Level Benchmark

Section IV of the Company's service quality plan requires the review of whether staffing levels are in accordance with M.G.L. c. 164, § 1E. This statute provides, in pertinent part, that distribution companies, in complying with service quality standards established by the Department, may not make any labor displacements or reductions below staffing levels in existence on November 1, 1997 unless they are part of a collective bargaining agreement or otherwise approved by the Department. Mass. Gen. Laws c. 164, § 1E(b). Nantucket Electric Company's ("Nantucket Electric" or "Company") staffing levels have been addressed in its collective bargaining agreements and those of its New England affiliates, and thus Nantucket Electric has met the requirements of this statute.

Specifically, all but one of these collective bargaining agreements<sup>1</sup> contain the following stipulation:

The Union agrees that for the term of this agreement, all requirements of the Electricity Restructuring Act of 1997, including Section 1E related to staffing levels have been satisfied and that this agreement is a collective bargaining agreement under that language.

The remaining agreement<sup>2</sup> does not contain this stipulation. It contains more general language about management's right to make decisions about the company. Article III, Management's Rights, provides:

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<sup>1</sup>The following agreements, all effective 2003 - 2007, contain this language: (1) Local Unions Nos. 326 and 486 of the International Brotherhood of Electrical Workers, (2) Utility Workers Union of America, AFL-CIO, Brotherhood of Utility Workers Council, Locals Nos. 317, 322, 329, and 330 and (3) Utility Workers Union of America, AFL-CIO, Locals No. 362 and 654.

<sup>2</sup>The Utility Workers Union of America, AFL-CIO, Local No. 654, effective April 1, 2004 - March 31, 2008.

### **Additional Service Quality Reporting Requirements**

The Brotherhood agrees, for itself and its members, not to hinder or interfere with the management of the Company in its several departments on any matter not otherwise specifically addressed in this agreement, including, but not limited to actions related to the following matters: selection of the workforce, including the criteria on which those decisions are based; assignment of the work; direction of the work force; scheduling; *staffing levels*; discipline or discharges for proper cause; and the right to transfer employees to work for which they are better suited and *to furlough employees for any reason, including lack of work or efficiency in operations.* (Emphasis supplied)

As a result, the appropriateness of Nantucket Electric's staffing levels has been addressed in the collective bargaining agreements, and thus, Nantucket Electric is in compliance with M.G.L. c. 164, §1E. No further review of Nantucket Electric's staffing levels is required.

#### Property Damage

Pursuant to Section VIII.A of the Company's Service Quality Plan, the Company reports to the Department on property damage to Company-owned property in excess of \$50,000. In 2004, there were no occurrences that produced damage to company property in excess of \$50,000.

#### Line Losses

Pursuant to Section VIII. A. of the Company's Service Quality Plan, the Company is providing substantiation of (1) its Electric Distribution Line Loss value, (2) the accompanying adjustments that were made to standardize the value to specific reference conditions, and (3) the specific reference conditions in Attachment B.

## **Additional Service Quality Reporting Requirements**

### Capital Expenditure Information

Pursuant to Section VIII.E of the Company's Service Quality Plan, the Company is providing:

1. Attachment C: A summary worksheet showing Nantucket Electric approved and completed transmission and distribution capital expenditures by year (1993-2004).
2. Attachment D: A detailed report for 2004<sup>3</sup> showing expenditures by project, including a description of each project.

### Spare Component and Inventory Policy

Pursuant to Section VIII. F of the Company's Service Quality Plan, the Company provides the following description of its spare component and inventory policy.

National Grid USA ("National Grid") has a centralized corporate structure such that the Supply Chain Management functions that exist in New York and New England are jointly managed. This includes procurement, materials planning, computer support systems, a common set of operational practices, and a system-wide investment recovery practice. The Company's inventory is therefore managed in conjunction with the inventory of the other National Grid distribution companies ("Companies"). There is a centralized distribution center ("CDC") in Franklin, Massachusetts and twelve regional warehouses in New England. In New York, there is a CDC and two hub warehouse locations. These CDCs and warehouses receive, store, and distribute materials and supplies to meet day-to-day requirements for new construction, rebuilds,

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<sup>3</sup> Prior year detailed capital expenditure information has been provided to the Department as follows: 1993-2001 in Docket D.T.E. 01-71B on March 1, 2002; 2002 in Docket D.T.E. 03-20 on March 3, 2003; 2003 in Docket D.T.E. 04-22 on March 1, 2004.

### **Additional Service Quality Reporting Requirements**

repairs, and service restoration due to severe weather conditions. The Companies manage \$60 million in inventory and distribute approximately \$90 million in materials throughout the National Grid service territories. At this time, Nantucket Electric and the other New England distribution companies routinely share inventoried materials with each other. Sharing with the New York distribution company occurs during emergencies only.

Through its system-wide inventory management practice, National Grid is able to reduce its inventory by standardizing items, decreasing lead-times associated with aggressive negotiations with vendors, and eventually sharing inventories. Emergency material distribution can also be enhanced system-wide. These inventory reductions do not affect the ability to provide reliable service to customers, however, as National Grid has established important safeguards to balance the risk of running out of critical items in the course of this methodical inventory reduction. For example, it monitors the accuracy of the inventory, provides flexible delivery services, and develops cross-functional solutions for material supply consistent with customer service requirements. These actions will result in a cost effective, coordinated inventory management system.

National Grid works to obtain the maximum salvage value for idle assets classified as surplus or obsolete inventories, scrap, and retired capital equipment. These assets and waste management activities will continue to include security, control, and environmental accountability during the disposal of these idle assets and commodity items. A number of investment recovery programs exist in New York, with the current focus on the use of the wire

### **Additional Service Quality Reporting Requirements**

granulation service, a wire material recovery process. In New England, implementation of a new transformer disposal process will increase the investment recovery effort in that region.

#### Customer Surveys

Pursuant to Section III.C of the Company's Service Quality Plan, the Company is providing:

1. Attachment E, page 1: Results of a customer satisfaction survey of a statistically representative sample of residential customers.
2. Attachment E, page 2: Results of a survey of customers randomly selected from those customers who have contacted the Company's customer service department within 2004.

#### Annual Major Outage Events

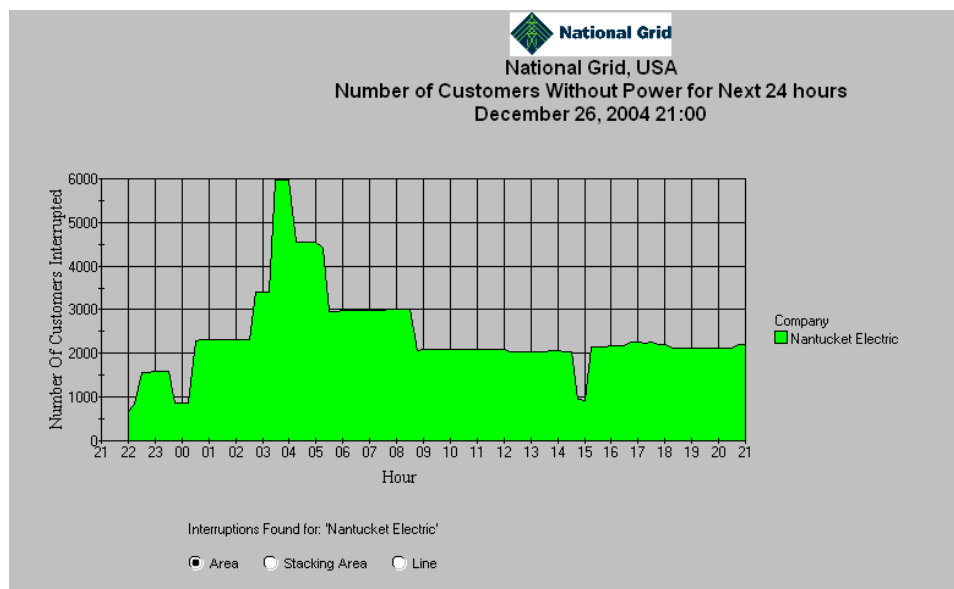
Nantucket Electric had four excludable major events in 2004. Details of these events, which occurred on March 31, 2004, August 9, 2004, December 3, 2004 and December 26-28, 2004, are discussed below.

1. On March 31, 2004, the Nantucket Fire Chief requested that the Company de-energize three circuits from the Candle Street substation (101L2, 101L3 and 101L4) due to safety reasons after a large gasoline leak was found in a tank behind the substation. This interruption resulted in 5,077, or 44%, of Nantucket Electric's customers being out of service for up to 39 minutes.
2. On August 9, 2004, the Company experienced two interruptions which resulted in 2,132, or 18%, of Nantucket Electric's customers being out of service. One interruption was caused by two blown lightning arrestors and resulted in 2,118 customers being out of service for between 25 and 27 minutes. The other interruption was caused by a ground

### Additional Service Quality Reporting Requirements

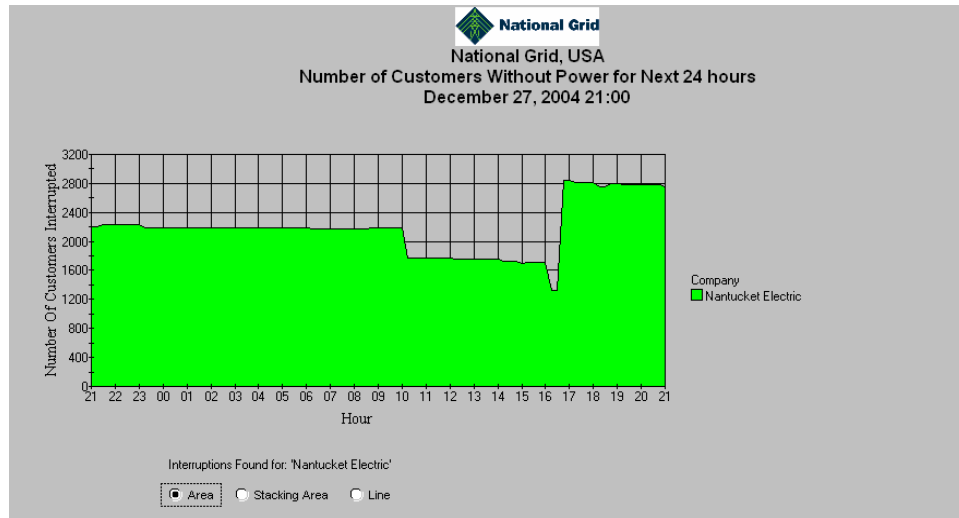
fault between the 2 padmount transformers and resulted in 14 customers being out of service for three hours and 11 minutes.

3. On December 3, 2004, 1,980, or 17%, of Nantucket Electric's customers were out of service for 17 minutes when a station breaker tripped open due to a blown lightning arrester on a riser pole.
4. From approximately 10:00 pm on December 26, 2004 to approximately midnight on December 28, 2004 the entire Nantucket Electric service territory experienced a severe snow storm with excessive ice and wind. This storm resulted in 10,876, or 93%, of the Company's customers being out of service. Figures 1, 2 and 3 below reflect the number of customers without service on an hour-by-hour basis during the storm.

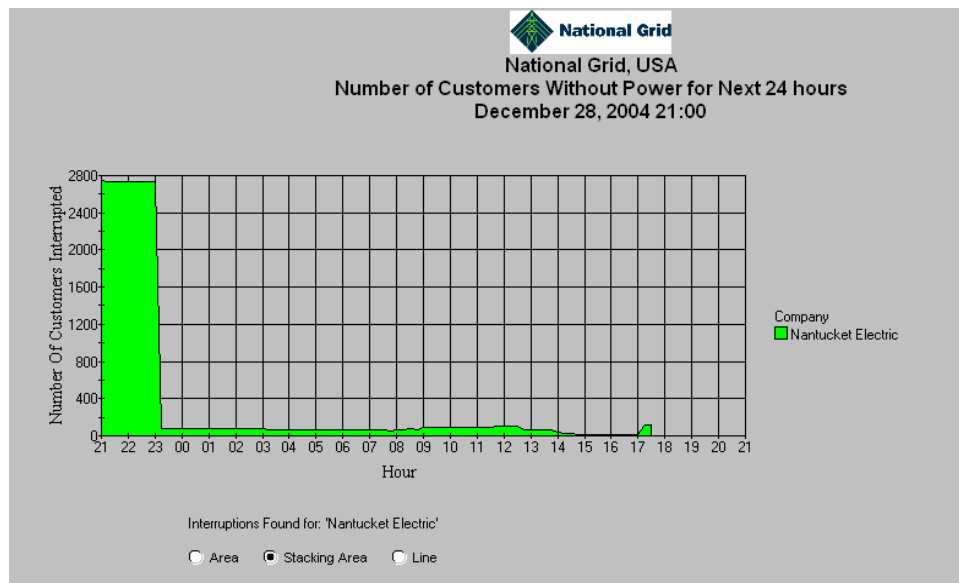


**Figure 1. Nantucket Electric customers Impacted by Hour – Evening of December 26 to December 27, 2004**

## Additional Service Quality Reporting Requirements



**Figure 1. Nantucket Electric customers Impacted by Hour –  
 Evening of December 27 to December 28, 2004**



**Figure 1. Nantucket Electric customers Impacted by Hour –  
 Evening of December 28**

As can be seen in the above graphs, approximately 1,500 customers were interrupted between 10:00 pm and 12:00 am on December 26 -27, 2004. As the storm progressed on December 27, 2004, a second wave of outages began shortly before 1:00 am and peaked between 3:00 am and 5:00 am, with approximately 6,000 customers out of service. The longest duration of interruptions were experienced by 12 customers on Eel Point Road

### **Additional Service Quality Reporting Requirements**

who were without service from December 26, 2004 at 10:18 pm to December 27, 2004 at 2:50 pm, or 40 hours and 32 minutes.

#### Poor Performing Circuits

Pursuant to Section VIII.G of the Company's Service Quality Plan, the Company has identified the poor performing circuits set forth in Attachment F.

#### Tree Trimming

In response to the reporting requirements set forth in Section VIII.D of the Company's Service Quality Plan, the Company's policy on tree trimming is presented in Attachment G.





### **Substantiation of Electric Distribution Line Loss Value – Calendar Year 2004**

Distribution line losses are calculated as the difference between System Delivered MWh and the sum of Company Use and Cycles Sales. This is expressed as a percent of System Delivered MWh and adjusted for the number of billing days versus the number of calendar days. For 2004, the value is 9.82%, as shown on page 2.

System Delivered MWh are measured and collected daily at bulk tie-line and substation metering points. These MWh measure total energy delivered to the Nantucket Electric retail service area. System Delivered MWh include the energy consumption of all retail customers, Company Use and distribution line losses, as well as theft and other unaccounted for energy. Daily System Delivered MWh are summed to calendar months and the year.

Company Use consists of metered MWh that are tracked but not billed. This includes the energy use of Nantucket Electric facilities. Company Use accounts for less than 0.2% of Delivered MWh.

Cycle Sales refer to MWh measured at customer metering points and collected over the 21 billing cycles of a month. The billing cycles refer to the days on which customer meters are read. This is determined by the meter reading schedule. It is necessary to read customer meters and issue bills on a cycle basis over the course of an entire month because of the sheer number of retail customers.

The 21 billing cycles roughly coincide with the non-holiday weekdays of a month. For example, MWh collected in Cycle 1 consist of customer meter reads from the first non-holiday weekday of the monthly billing period. This day is always close to or at the first day of the calendar month. Cycle 1 MWh measure what customers in that billing cycle consumed since Cycle 1 of the previous month. This consists mainly of energy usage from the previous month. In general, MWh collected from the earlier billing cycles (1-10) reflect more energy usage from the previous month than the current month. MWh collected from the later billing cycles (11-21) reflect more usage from the current month than the previous month. Total Cycle Sales are the sum of all MWh collected in Cycle 1 through Cycle 21 of the month. Cycle Sales thus measure energy consumption billed over the calendar month but consumed during both the current and previous month.

To mitigate the timing difference between Cycle MWh Sales and System Delivered MWh, the Electric Distribution Line Loss value is adjusted for the number of days that customers are billed for in a year versus the number of calendar days that System Delivered MWh are collected for. For example, in 2004 there were 366 calendar days (leap year) for which System Delivered MWh were collected. However, per the meter reading schedule, customers were billed for 366.72 days in 2004, or 0.20% more than the number of calendar days. As a result, Cycle MWh Sales were approximately 0.20% higher than if customers had been billed for only 366 days; and the Electric Distribution Line Loss value was 0.20% lower. Accordingly, 0.20% was added to the Electric Distribution Line Loss value to adjust for the number of days billed in 2004.

The difference between System Delivered MWh and the sum of Cycle Sales and Company Use still includes other timing differences in consumption, such as differences in consumption due to weather and day type. This is reflected in column (c) by the negative values shown in February and September, as well as the larger values in July and August. However, these differences offset each other in large part over the course of a full year.

Nantucket Electric Company  
Calculation of 2004 Electric Distribution Line Loss Value

<u>Month</u>	<u>System Delivered Energy (Calendar MWh) (a)</u>	<u>Cycle Sales Plus Company Use (Billed MWh) (b)</u>	<u>Percent Losses &amp; Unbilled (c)=[(a)-(b)]÷(a)</u>	<u>Number of Calendar Days (d)</u>	<u>Number of Billed Days (e)</u>	<u>Percent Difference (f)=[(d)-(e)]÷(d)</u>	<u>Adjusted Percent Losses &amp; Unbilled (g)=(c)-(f)</u>
Jan-04	15,514	12,613	18.70%	31	32.29	-4.16%	22.86%
Feb-04	12,259	12,804	-4.45%	29	28.52	1.66%	-6.10%
Mar-04	11,899	10,687	10.19%	31	29.81	3.84%	6.35%
Apr-04	10,481	9,953	5.04%	30	29.48	1.73%	3.30%
May-04	10,404	9,252	11.07%	31	29.38	5.23%	5.85%
Jun-04	11,921	9,750	18.21%	30	31.67	-5.57%	23.78%
Jul-04	16,003	12,249	23.46%	31	31.00	0.00%	23.46%
Aug-04	16,940	13,061	22.90%	31	29.71	4.16%	18.74%
Sep-04	12,547	15,761	-25.62%	30	31.19	-3.97%	-21.65%
Oct-04	11,279	11,023	2.27%	31	30.43	1.84%	0.43%
Nov-04	11,115	9,790	11.92%	30	30.24	-0.80%	12.72%
Dec-04	12,765	11,451	10.30%	31	33.00	-6.45%	16.75%
2004	153,127	138,394	9.62%	366	366.72	-0.20%	<b>9.82%</b>



Nantucket Electric Company  
Summary of Capital Expenditures  
Years 1993 - 2004

<u>Year</u>	<u>Total</u>
1993	
1994	
1995	
1996	\$18,272,629
1997	\$11,544,191
1998	\$1,799,639
1999	\$1,953,661
2000	\$1,083,181
2001	\$1,596,007
2002	\$3,661,980
2003	\$2,994,934
2004	\$4,185,528



## **Capital Projects**

1. **Second underwater cable to Nantucket, Hyannis, Nantucket Island, (SE), 2006, \$39.3M**

Construct a new 115/46 kV substation in Barnstable and install one 115/46kV transformer, 46 kV circuit breaker, control house, bus structure and associated equipment. Install new 46 kV breaker and adapt 13.2 kV bus at existing Candle Street Substation on Nantucket. Permanently connect existing, spare 46/13.2 kV transformer. Install approximately a 33 mile long, 46 kV, underground and submarine cable system between the substations. Also, install a fiber optic cable within the power cable between the two locations. The second supply cable will provide a firm supply to Nantucket. The project will offer long-term reliability improvements and meet the island's projected growth.





**Nantucket Electric Company**

Customer Surveys - Random

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<u>Year</u>	<u>Survey Results</u>		<b>Updated Hist Data</b> <u>1999-2004</u>	<b>Original Benchmark</b> <u>1999-2001</u>
1999	87%			
2000	96%			
2001	95%			
2002	90%			
2003	96%			
2004	93%			
Average			93%	93%
STD			4%	5%

Represents the percent of customers who gave a rating of 5, 6, or 7 on a 7-point scale.

### Nantucket Electric Company

#### Customer Surveys - Callers

---

<u>Year</u>	<u>Survey Results</u>
2002	76%
2003	77%
2004	71%

	<b>Updated Hist Data</b> <u>2002-2004</u>	<b>Original Benchmark</b> <u></u>
Average	75%	n/a
STD	3%	n/a

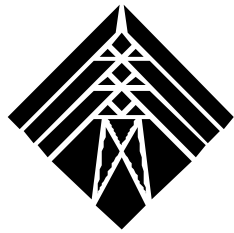
Represents the percent of customers who gave a rating of 6 or 7 on a 7-point scale.  
Eight types of transactions were included in the survey, and the overall results are weighted  
based on the number of transactions performed at the call center during the year.  
Nantucket Electric customers were first included in this survey during 2002.



2004 Poor Performing Circuits

Feeder	Division	SAIFI 2004	SAIDI 2004	Worst 10 % SAIFI 2003	Worst 10 % SAIFI 2004	Worst 10 % SAIDI 2003	Worst 10 % SAIDI 2004	Exceeds 300% Average SAIFI 2003	Exceeds 300% Average SAIFI 2004	Exceeds 300% Average SAIDI 2003	Exceeds 300% Average SAIDI 2004	Corrective Actions
101L6	Bay State South	3.12	135.31	✓	✓			✓	✓			This feeder has had three tree related interruptions that have significantly increased the SAIFI index. Portion of the mainline circuit path is lined with historic elm trees which the Town has allowed only minimum trimming. Automatic reclosing will be added to the circuit protection scheme to reduce the impact of transient limb and branch contacts. Efforts will continue to secure approval to remove hazard trees and limbs whenever identified.





**National Grid**

***NEW ENGLAND***

***VEGETATION MANAGEMENT  
DISTRIBUTION LINE  
MAINTENANCE  
T & M  
PROGRAM MANUAL***

***April 1, 2004***

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## ***GLOSSARY***

**Adventitious buds-** Dormant buds located in a leader.

**Annual growth-** A yearly incremental stage of vegetation growing that can be visually determined by the annual nodes.

**Arborist/Forester-** Here after referred to as “Arborist”. A National Grid USA employee whose role within their respective administrative district is to plan, budget, execute, and audit vegetation management projects; resolve customer issues; work closely with district vendor leadership to achieve performance goals & assist the administrative district with municipality relations/issues. Additionally, to participate in managing storm restoration; implement program policies/programs & provide regular status updates.

**Brush-** Vegetation less than four inches DBH that may reach the overhead facilities at maturity.

**Clearance-** The distance between vegetation and the overhead facilities.

**Company-** This represents the National Grid USA Retail Distribution companies.

**Construction type-** The configuration and design of the lineal overhead facilities.

**DBH-** The diameter of vegetation measured at a point four and one half feet above ground level.

**Dominant-** Exerting ecological or genetic superiority.

**Dormant-** Not actively growing but protected from the environment.

**Flat cutting-** The practice of cutting vegetation at ground level under or adjacent to overhead facilities, where the vegetation has the potential to interface with the overhead facilities.

**Hazard-** Vegetation which appears to: be dead or dying, be structurally weak, have loss of bark, have loss of foliage, and have stress breaks.

**Lateral branch-** A branch extending from a parent branch or stem.

**Line clearance-** The practice of removing vegetation from around overhead facilities.

**Main leader-** A dominant upright stem, usually the main trunk.



**Multiple leaders** - Many stems of vegetation originating from the same root system.

**Node**- A point on a stem at which a leaf or leaves are attached.

**Overhead facilities**- All electrical conductors and equipment that are attached to a utility pole and are used for the conveyance of electricity.

**Permission**- The act of receiving approval from the appropriate property owner, where the vegetation is located, in order to perform necessary preventative maintenance on the vegetation.

**Plant**- Relative to distribution vegetation management purposes, the definition is a tree, vine, or shrub.

**Preventative maintenance**- The pruning, trimming, removal or chemical treatment of vegetation, growing or existing in proximity to overhead facilities, for the purpose of preventing such growth from interfering with the overhead facilities.

**Pruning**- The removal, in a scientific manner, of dead, dying, diseased, interfering, objectionable, and/or weak vegetation branches.

**Shrub**- A low usually multi-stemmed woody plant.

**Sucker growth**- New growth originating from adventitious buds. Usually induced by removing a branch.

**Tree**- A woody perennial plant having a single usually elongate main stem.

**Trim**- See "Pruning"

**Trim cycle**- A predetermined period of time between preventative maintenance activities.

**Trim zone**- The area in and around overhead facilities where vegetation is removed.

**Vegetation**- Plant life such as trees, shrubs, vines, and brush that has a potential to interface with overhead facilities.

**Vendor**- A Vegetation Management service provider who has a Purchase Order to provide such services to the National Grid USA companies, Districts, and Arborists.

**Vine**- A plant whose stem requires support and which climbs by tendrils or twining.

***NATIONAL GRID USA companies***

***NEW ENGLAND***

***DISTRIBUTION LINE  
VEGETATION MANAGEMENT  
REQUIREMENTS***

***April 1, 2004***

### ***PURPOSE***

To define a set of Distribution Line Vegetation Management Requirements that is implemented by the Company on a uniform basis. These requirements describe the specifications for routine preventative maintenance of vegetation which includes the pruning and removal of trees as well as the removal of dead, unsound, and structurally weak branches and leaders. The Company's Distribution Line Vegetation Management Requirements are designed to address reliability and safety through the understanding of the potential conflicts between vegetation and overhead facilities.

### ***TRIM CYCLE***

The recommended trim cycle is a five-year cycle with an interim hazard tree review. The cycle is implemented on an annual basis, by identifying the feeders that are due to be trimmed and prioritizing them on a reliability performance basis. The hazard mitigation work is implemented by identifying which feeders are experiencing reliability performance issues. They are surveyed for growth and hazard situations and then prioritized for hazard mitigation. Customer Service lines are only trimmed on the trim cycle basis unless the Arborists determines that a special condition exists requiring an interim attention.

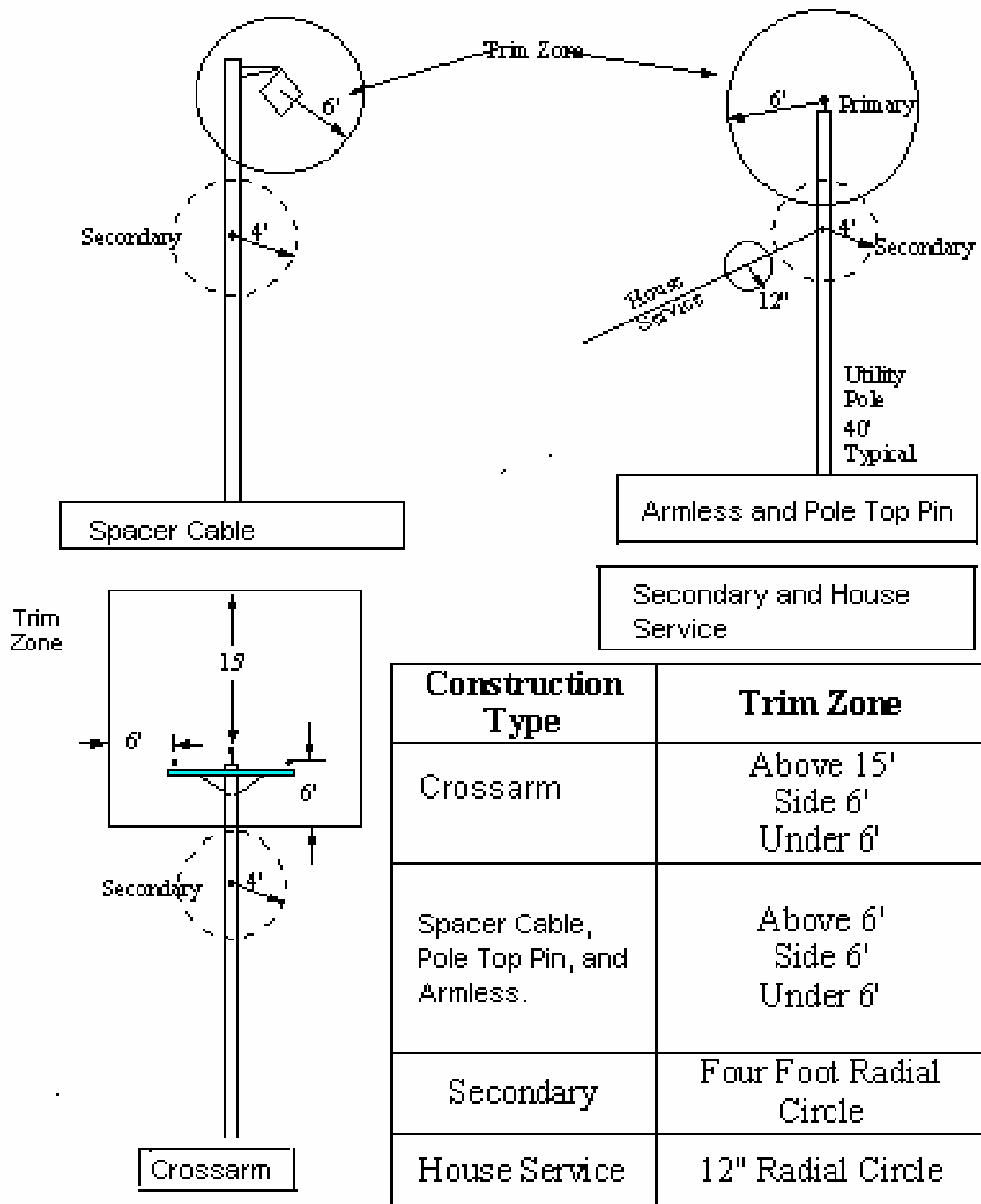
### ***TREE TRIMMING ZONE SPECIFICATION REQUIREMENTS***

Table A below illustrates the clearance distance required by the Company for all distribution line clearance maintenance activities based on Overhead facilities construction types. As with all programs there are exceptions to the rules and additional special conditions requirements. These are all clearly spelled out in the following sub-sections. These specifications are designed to prevent vegetation capable of interfering with the overhead facilities, from encroaching upon them, within a five-year period.

**TABLE A**

CONSTRUCTION TYPE	TRIM ZONE
ALL CROSS ARM CONSTRUCTION	ABOVE 15'
	SIDE 6'
	UNDER 6'
ALL SPACER CABLE, POLE TOP PIN, AND ARMLESS CONSTRUCTION	ABOVE 6'
	SIDE 6'
	UNDER 6'
TRIPLEX AND RACKED SECONDARY	FOUR FOOT RADIAL CIRCLE
HOUSE SERVICE	12" RADIAL CIRCLE

## Vegetation Management Distribution Line Maintenance Minimum Requirements



### ***HAZARD REMOVALS WITHIN TRIM ZONE***

Remove all hazardous branches from above or adjacent to the overhead facilities to protect the facilities until the next trim cycle.

### ***SELECTIVE FLAT-CUTTING WITHIN THE TRIM ZONE***

Targeted for flat cutting will be tree species that are under the electric conductor(s) and are over 8' in height.

### ***TRIM ZONE EXCEPTIONS***

#### **Issues restricting trim zone requirements**

**Permissions restrictions-**In the event that permission from a property owner to trim or remove in accordance with these specifications cannot be obtained, the following steps will be taken:

**LIGHT TRIM-** Computer or form entry with inclusion of town, street address and pole number.

**REFUSAL TO TRIM-** Computer or form entry with inclusion of property owner name, address, telephone number, pole number, description of site, and if possible, signature of property owner.

**REFUSAL FOR HAZARD REMOVAL-** If permission is denied for the removal of a hazardous limb/tree a computer or form entry with inclusion of the property owners name, address, telephone number, pole number, description of defect or hazard and if possible, property owners' signature. These serious hazards warrant a photo of the tree and follow up by the Arborist.

\*Above information will be provided back to the Arborist on a regular basis, as identified.

**Structural restrictions-** In the event that the main leader and/or scaffolding branches fall within the trim zone are determined not to interfere with the overhead facilities; structurally sound and; free of sucker growth within the trim zone, then the main leader and/or branch may remain in the trim zone.

## ***TYPES, METHODS, AND TECHNIQUES***

### **Acceptable Tree Trimming Types**

There are three basic types of trimming that will be discussed in this section. They include; Crown Reduction (Top trimming), Side trimming, and Overhang trimming. There are two additional trimming terms used when discussing trimming types and they are under trimming and V or Through trimming. They will not be listed as separate types because they usually involve one or more of the types already listed. The type of trimming that is selected to be used should be based upon the tree to overhead facility relationship, factoring in the type of tree being trimmed and its growth habits. The ultimate goal is to achieve the necessary clearance to provide a continuous supply of reliable electrical service free of interference from trees while maintaining, as close as possible, the natural characteristics of the tree being trimmed.

**Crown Reduction** - This type of trimming is also called "Top trimming". It is best when used on slow growing trees. The trimming methods employed to accomplish this affect include drop crotching and/or directional trimming. The trimming type reduces the top of the trees crown when the tree is directly located underneath the overhead facilities and is intended to give the tree a natural look. The trimming should be done with as few cuts as possible and the branches should cut back to a leader, which will minimize the potential for sucker growth.

**Side Trimming** - Trees growing adjacent to, into, and towards overhead facilities should be side trimmed by removing the entire branch back to the main leader or at least free of the trim zone. Trees with branches that produce sucker growth when cut should definitely be removed. Care should be taken to reduce the effect of unsightly notches by shaping adjacent branches.

**Overhang Trimming** - This is where the overhead facilities pass under a portion of the crown and the lower branches are removed to provide trim zone overhead clearance. If it is not possible to totally remove overhangs, then every attempt should be made to reduce the weight of the overhang by trimming the branches. All dead, damaged, or weakened overhang branches must be removed.

### **Acceptable Tree Trimming Methods**

There are two basic methods employed in utility line clearance trimming, "Drop Crotching" and "Directional Trimming". These are the two methods that will be accepted by the arborists. On occasion a vendor may be requested to apply an alternative method to fulfill a special set of needs or criteria. Although not considered a trimming method, trees that are approximately 15 feet in height should be trimmed at the nodes. Alex Shigo

calls this "First Order Pruning". The branches that should be retained are those that will produce future growth directionally away from the overhead facilities.

**Drop Crotching** - This method of trimming calls for removing some of the larger branches at variable distances below the top of the crown. It is intended to retain as much of the natural characteristics of the tree as possible while thinning the crown of the tree. This method of trimming should eliminate future sucker growth, when proper nodal pruning cuts are made, and reduces the amount of trimming work required in subsequent trimming operations.

**Directional Trimming** - The intent of this method is to direct future growth away from the overhead facilities. It is accomplished by cutting the growth to a lateral branch, which will redirect its future growth away from the overhead facilities.

In Dr. Alex L. Shigo's publication, "Pruning Trees Near Electric Utility Lines" he indicates that 90% of the time 3 branches can be removed to provide 90% of the clearance, which is his 90-3-90 concept. When utilizing these two methods to accomplish a trimming type, this concept should be considered as an employable technique. The use of the two methods will provide the maximum amount of clearance necessary to assure proper clearance from the overhead facilities while minimizing the amount of tree deformation occurring.

### **Acceptable Pruning Techniques**

Pruning techniques and practices are fully explained and diagramed in ANSI A-300, and another excellent reference is Dr. Alex L. Shigo's publication "Pruning Trees Near Electric Utility Lines". Given the fact that these publications provide as excellent guides for this subject area, we feel that there is no need for further explanation.

## ***HAZARD MITIGATION***

All vegetation hazards which take one hour or more to remove should not be looked at as a preventative maintenance function but as a hazard mitigation function and should be managed as such. The hazard removal should be identified by the nearest pole location and should be scheduled for removal by a hazard mitigation crew, unless the hazard poses an immediate outage or safety situation. In the event of an immediate outage or safety situation the vendor should immediately notify the Arborist for a determination of removal by the vendor.



***NATIONAL GRID USA companies***

***NEW ENGLAND***

**VEGETATION MANAGEMENT  
*VENDOR***

***REQUIREMENTS***

***FOR***

***T & M CREWS***

***April 1, 2004***

## ***PURPOSE***

To define the role and expectations of the Company's vendors in relation to vegetation management activities performed by the Vendor's T & M crews for the Company. The role and expectations will include such items as; personnel, equipment, customer relations, government relations, Arborist relations, storm emergency implementation procedures, time management, workload implementation plans, wood waste management, and other related items.

## ***VENDOR REQUIREMENTS***

### ***PERSONNEL***

The vendor shall determine and provide the appropriate level of supervision required to maintain high quality workmanship and optimum productivity in a cost effective manner and in accordance with the supervisory requirements defined in this Chapter.

The vendor is to provide the appropriately trained and certified labor force required to maintain high quality workmanship and optimum productivity while implementing the vegetation management requirements and vendor requirements.

All services are billable in accordance with the vendor submitted labor and equipment rate sheets. Any services required by the Arborist, which are not on the vendor submitted rate sheets, will require prior approval from the Lead Arborist and Supply Chain.

### ***TRAINING***

The vendor shall provide a minimum of eight hours of annual safety training and eight hours of annual professional development training per tree crew employee. All training shall be documented and all documentation shall be provided to the Company Arborist. The Company will provide straight labor time only for such training, up to these maximums. All daily tailgate work/safety meetings which are less than 1 hour are not to be counted towards this time. Any other training required by the vendor which is 1 hour or greater will not be billable once the 16 hour threshold has been reached. Where the vendor feels it is applicable, the vendor may mutually agree to combine their training with Arborist required informational sessions. In this event, the time required by the Arborist will be fully billable including equipment.

## ***VEGETATION MANAGEMENT SERVICES***

**Preventative Maintenance-** Those services as described in the "Distribution Line Vegetation Management Requirements" section. All Preventative maintenance will be

conducted on reliability prioritized feeder basis.

**Hazard Tree Mitigation-** Those services as described in the “Distribution Line Vegetation Management Requirements” section entitled Hazard Mitigation. The vendor personnel should continuously look for hazardous conditions, assess level of severity, and identify the hazard location by street and pole number. They should immediately report such hazard conditions to their immediate supervisor for reporting to the Arborist. In the event that they cannot reach their immediate supervisor, they should directly notify the Arborist.

**Re-trims -** All work which is determined by the Arborist to be inside the “Distribution Line Vegetation Management Requirements” which does not have documentation as to why the “Distribution Line Vegetation Management Requirements” could not be met will be required to be re-trimmed at the vendors expense. Any work that gains a change in permission status after trimming has occurred will be re-trimmed as a component of the Company’s expense.

### ***CUSTOMER RELATIONS***

Workers shall be properly attired and act in a professional manner. Contact with customers shall be done in a businesslike manner and all requests shall be clear and precise to avoid customer misunderstanding or apprehension. Should there be a serious misunderstanding with a customer, which the vendor cannot fully address or alleviate; the vendor shall notify the Arborist.

### ***UTILITY RELATIONS***

**Annual Vegetation Implementation Plan-** The Arborist will inform the vendor supervisory personnel of the prioritized feeders to be maintained, the targeted mileage goals, and not to exceed cost per mile data. The vendor supervisory personnel will provide the Arborist with a proposed Annual Vegetation Implementation Plan to accomplish the expected goals in a cost effective and productive approach. The Arborist will either accept the Annual Vegetation Implementation Plan or work with the vendor to modify it into an acceptable document to provide for other District concerns the Arborist may have. Once the Arborist has approved the plan it can be implemented. During the course of the year based on data provided by the Arborist, the plan may have to be adjusted to account for data fluctuations.

**Communication-** The vendor shall communicate with the Arborist on a routine basis on such matters including but not limited to: work progress; prior notification in changes to crew complement; lost time; etc. The vendor labor force will contact the Company daily and report; work location and daily location changes, observed overhead facility

problems and outages particularly crew caused outages.

**Data Management-** The vendor is responsible for collecting, on company provided electronic data collectors, the required data information requested. In the event that an electronic data collector is not available, then data collection forms will be provided by the company requesting the relevant data information required. The vendor's personnel are responsible for the accuracy of the data that they are reporting and the safe handling of the electronic data collector. If the vendor's personnel breaks the data collector and it is found by the Company to be due to negligence on the vendor's personnel behalf, then the vendor will be charged for the replacement of the electronic data collector.

**ALL DATA INFORMATION COLLECTED ON BEHALF OF A NATIONAL GRID USA COMPANY IS CONFIDENTIAL AND THE SOLE OWNERSHIP OF NATIONAL GRID USA.**

### ***STATE RELATIONS***

The vendor is responsible for notifying the proper state official for all proposed vegetation management activities on state highways. If a permit is required, the company shall obtain the permit. Under specific situations, the Arborist will obtain the necessary permits. Copies of required permits will be kept on site with the crew.

### ***PERMISSIONS***

The Vendor will be responsible for determining and implementing the most cost effective approach, for the company, in obtaining permission.

**Private property-** The Vendor must obtain permission from all private property owners prior to working on private property, except where noted by the Arborist. The vendor will provide the customer, if not at home, with a Company Vegetation Management Program door knocker brochure and a vendor permission card. The vendor shall make a minimum of three documented and reasonable attempts at gaining permission from private property owners. All subsequent skips should be reported to the Arborist for follow up. The vendors crews will not trim or remove vegetation if contact with private property owners cannot be made or if the private property owner refuses to grant permission.

**Municipal property-** The vendor shall obtain permission to do tree work on municipal trees from the proper authority before doing the work. The vendor shall notify the proper municipal official (e.g. Tree Warden, etc.) and let them know where the vendor crews will be working. If a municipal official refuses clearances as specified in the "Distribution Vegetation Management Requirements" the vendor should document the restriction and inform the Arborist.

**Permissions restrictions-** In the event that permission from a property owner to trim and remove trees in accordance with these specifications can not be obtained, the following steps will be taken:

**Light trim-** Computer or paper form entry with inclusion of town, street address and/ or pole number.

**Refusal to trim-** Computer or paper form entry with inclusion of property owner name, address, telephone number, pole number, description of condition and possible signature.

**Refusal for hazard removal-** If permission is denied for removal of a hazardous limb or tree, a computer or form entry with inclusion of the property owner's name, address, telephone number, pole number, description of condition and possible signature. These serious hazard conditions warrant immediate follow up, including a photo of the tree by the vendor supervisor or the Arborist.

All information above will be reported back to the Arborist on a regular basis, or at most, quarterly.

## ***EQUIPMENT***

The vendor will provide equipment necessary for the performance of the requested services in accordance with the Distribution Line Vegetation Management Requirements and the Purchase Order. This equipment shall be properly maintained, in good operating and presentable condition. The equipment must meet all applicable DOT, ANSI and OSHA Regulations/Standards.

Each Company Arborist will require a minimum number of truck mounted aerial lifts with the lift to be a minimum of fifty-foot platform height. Truck mounted aerial lifts with a platform height greater than 50' will, when required by the Arborist, be billed according to the labor and equipment rate sheet. Any equipment required by the Arborist, which are not on the vendor submitted rate sheets, will require prior approval from the System Arborist and Supply Chain.

The vendor shall be responsible for supplying, at a minimum, a properly operating pager to all supervisory personnel who respond to requests by the Arborist. This is imperative for both normal business and emergency response.

## ***WORK SITE CLEAN-UP***

The vendor is responsible for all work sites to be properly cleaned of vegetation debris, including the legal and environmentally acceptable disposal of leaves, branches, wood, wood chips or slash in accordance with federal, state, and municipal regulations and guidelines.

In the Districts where wood chip disposal/work platform areas are provided, the woodchips must be free and clear of all trash and other undesirable debris that could reduce the resale of the woodchips. Attention to chipper maintenance for the consistent production of high quality woodchips is imperative.

### ***HOURS OF OPERATION***

**Normal work schedule-** 7:30 a.m. - 4:00 p.m. Adjustable based on agreement between the Arborist and Vendor. This is based on a 40-hour workweek and daily includes a 15 minute morning coffee break and a 30 minute lunch break. Also, up to 15 minutes each morning will be available to conduct D.O.T. record keeping and vehicle safety checks.

**Travel and Chip Disposal Time-** The hours of operation are to include travel to and from the work site, fuel time, and wood chip disposal. Until such time that the Arborist provides a convenient parking and chip disposal area, the vendor is responsible for assuring that travel and disposal time is at a minimum.

**Excess Travel-** In the event the Arborist needs to reassign crew(s) to a temporary work area, the Arborist may authorize additional travel time.

**Additional Time-** Time Not Worked due to; weather, equipment breakdown time and, Company scheduled holiday may be rescheduled and/or authorized by the Arborist.

### ***STORM EMERGENCY RESPONSE***

**Vendor storm standby-** During severe inclement weather, crew(s) may be placed on storm standby by the Arborist or their designee. They will be instructed as to which Company staging area to report to until such time needed for actual storm restoration work. Tree Crew standby time should be kept to a minimum by utilizing the crews, whenever possible, to conduct preventative maintenance activities while waiting to be deployed to a weather related event. This would be primarily during daylight hours when crews are being held at the end of the day due to the threat of an incoming storm. The employee and equipment billable rates will take effect as soon as they are requested by the Company Arborist to be on standby status.

**Arborist vendor storm response-** During off-hour call out for storm or emergency work, the vendor will be allowed no more than 60 minutes to be at the work location from the time that the Arborist makes contact with the first vendor contact person.

**Additional vendor storm response-** The vendor will provide additional crews as requested by the System Arborist or their designee to the extent possible. The Lump Sum crews will be allocated to all Divisions and their Districts on a retail company basis and based on need, at the discretion of the New England System Arborist.

### **Storm Equipped Aerial Lift Trucks**

All equipment required for storm response purposes shall be in a safe and reliable operating condition.

The following is required equipment during storm conditions:

Truck mounted aerial lift and lift to be a minimum of forty five foot platform height, and all necessary tools, equipment and clothing for storm restoration work including night lighting. Chippers are not required storm equipment unless requested by the Arborist.

***NATIONAL GRID USA companies***

***NEW ENGLAND***

***ARBORIST REQUIREMENTS***

***April 1, 2004***



## ***PURPOSE***

To define the role of the Company Arborist within the Vegetation Management Program.

This description is to include the relationship between the Arborist Requirement, the Vendor Requirements, and Vegetation Management Requirements. The interrelationship is designed to insure high cost effective productivity without jeopardizing work quality and reliability. These requirements identify seven major areas.

## ***PLAN, BUDGET, & ADMINISTRATION***

**Plan-** The Arborist is responsible for developing long and short term plans for their respective management area. This is done by analyzing the vegetation management program data and conducting field survey validations to prioritize preventative maintenance activities and hazard tree removals on a feeder basis. They are also responsible for the workload planning of retail company R.O.W. maintenance activities, within the same management area.

**Budget-** In concert with the long and short term plans the Arborist is responsible for developing plan related budgets to show what financial resources will be required to carry out the identified plans. Annually, the Arborist will prepare a workload budget and plan of work required to meet the objectives of the long range plan. Once budgets are established and if they differ from the annual budget and workload plan, then it is the Arborists responsibility to reconcile the annual budget and plan to conform with the new budgeted dollars.

**Administration-** The Arborist is ultimately responsible for overall program administration, which includes; the implementation of the long, short, and annual term plans within the approved budgets, management of all collected data, and attainment of annual goals and objectives. They are also responsible for working with the vendor in the development and approval of the Annual Vegetation Implementation Plan which is how the annual plan and goals are achieved.

## ***AUDIT AND EVALUATION OF INTERNAL AND EXTERNAL PROGRAM PERFORMANCE***

**Internal-** The Arborist is responsible for electronic data and records management and maintenance, fiscal accountability, environmental laws and regulatory adherence, following Company policy, procedures, and regulations and complying with Company fiscal and regulatory internal audit standards.

**External-** Through the implementation of quality control practices, the Arborist is responsible for assuring that the vendor meets or exceeds Company standards and expectations. This is done by auditing vendor; performance, work practices, safety procedures and guidelines, equipment condition, and impact on reliability. The Arborist will monitor vendor; cost effectiveness, trimmed miles accomplished, data management recording accuracy, customer satisfaction, appearance, and communication skills.

### ***EMERGENCY RESTORATION***

The Arborist is responsible for knowing, understanding, and implementing the Company's storm and emergency restoration policies and procedures. They should be prepared to implement these policies and procedures within their respective management area when necessary. All vendor personnel working within the Arborists management area, will be fully informed and aware of what is expected of them during a storm or emergency restoration situation, by the Arborist.

### ***INTERDEPARTMENTAL COORDINATION***

Periodically the situation arises where the services of one or more departments, within the Company, may be needed to implement and /or complete a project. It is the Arborists responsibility to know all internal parties within their management areas that may be needed and to coordinate the engagement of their services to implement and/or complete the task that the Arborists program needs implemented and/or completed.

### ***EXTERNAL PUBLIC RELATIONS AND EDUCATION***

It is important that the Arborist interacts with the vendor and the customer to assure that the customer understands the necessity, care, and professionalism of the services being provided to them, in order to obtain difficult or limited permission to provide the vegetation management program services. In the event that the vendor cannot get permission or gets limited permission from the property owner, the Arborist will take the documented information from the vendor and attempt to obtain the permission themselves. Regardless of the results, the Arborist should keep the documented event on file for future evidence. Whenever possible the Arborist should attempt to get a photo of the tree(s) in question.

This position will periodically have to make presentations about the importance and quality of service of the program to; neighborhood groups, civic groups,

elected officials, government regulators, vendors, and other interested parties. These presentations can encompass; scientific technical, programmatic, legal, and procedural information.

### ***PROFESSIONAL DEVELOPMENT***

The Arborist is responsible for its own continued professional development through: membership in affiliated professional organizations, career development, professional development, data management, electronic processing, office automation, and other associated seminars/courses.

### ***TECHNICAL ADVISOR***

Periodically, the Arborist is required to provide professional technical and scientific advise to other Company departments. On occasion the Arborist, may be required by the Company's legal department, to provide professional services as an expert witness.